

STRUCTURE AND METHOD FOR PROVIDING PRECISION PASSIVE ELEMENTS

Abstract

A circuit having a precision passive circuit element, such as a resistor or a capacitor, with a target value of an electrical parameter is fabricated on a substrate with a plurality of independent parallel-connected passive circuit elements. The plurality of passive circuit elements are designed to have a plurality of values of the electrical parameter which are spaced or offset at or around the target value of the electrical parameter, such as three circuit elements with one having a value at the target value, one having a value above the target value, and one having a value below the target value. Each passive circuit element also has a fuse in series therewith. A reference calibration structure is also fabricated, which can be a passive circuit element having the target value of the electrical parameter, in a reference area of the substrate under the same conditions and at the same time as fabrication of the plurality of passive circuit elements. The actual component value of the reference calibration structure is then measured, and based upon the measurement a single precision passive element of the

plurality of parallel passive circuit elements is selected by blowing the fuses of, and thus deselecting, the other independent parallel connected passive circuit elements.